CCAM

COMMONWEALTH CENTER FOR ADVANCED MANUFACTURING

Request for Proposal

To Establish Centers of Excellence in Advanced Manufacturing Workforce Training South and Southwest Virginia

Instructions, Terms and Conditions for Funding Awards

January 10, 2014

Due Date:
No later than 5:00 p.m.(EST), April 11, 2014

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General Information

Issue date: January 10, 2014

Issuing Organization:

The Virginia Tobacco Indemnification and Community Revitalization Commission (TICRC)
701 E. Franklin St., Ste. 501
Richmond, Virginia 23219
www.tic.virginia.gov

In partnership with:

Commonwealth Center for Advanced Manufacturing (CCAM)
5520 West Quaker Road
Disputanta, VA 23842
ccam@ccam-va.com

Reference materials and other resources;

- Boston Consulting Group (BCG) report, www.tic.virginia.gov , click link to "Advanced Manufacturing Workforce Plan Final Report".
- The National Association of Manufacturer's (NAM), www.nam.org
- The National Institute for Metalworking Skills (NIMS), www.nims-skills.org
- The American Welding Society (AWS), www.aws.org
- Siemens SMSCP, www.siemens-certifications.com

Contacts for further information: Prospective applicants are encouraged to direct questions in writing (e-mail is sufficient) to the contacts listed below. Pre-application meetings and/or conference calls with the TICR/CCAM sponsors are also encouraged. If the volume/content of questions justifies it, a FAQ list will be developed, posted on the TICRC website and shared electronically with prospective applicants.

Questions and information concerning eligibility, budget, budget match, funding schedule contact:

Tim Pfohl- Interim Executive Director
The Virginia Tobacco Indemnification and Community Revitalization Commission (TICRC)
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Questions and information concerning curriculum, certifications/credentials, equipment, and software contact:

Bruce Sobczak – Director Workforce Development
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I. Purpose

The purpose of this Request for Proposal (RFP) is to solicit proposals to fund at least three Centers of Excellence (CoE's) for advanced manufacturing training as partial fulfillment of the recommendations within the January 2013, Boston Consulting Group (BCG) report. The Tobacco Indemnification and Community Revitalization Commission (TICRC) in partnership with the Commonwealth Center for Advanced Manufacturing (CCAM) commissioned the BCG report and are now partnered in implementing the recommendations contained within that report. This RFP will focus primarily on establishing the CoE's

II. Background

The major objective of the CCAM and TICRC partnership is to bring new jobs in advanced manufacturing to southern and southwestern Virginia. The geographic focus of this effort includes the following localities:

Amelia	Appomattox	Bedford	Bland
Bristol City	Brunswick	Buchanan	Buckingham
Campbell	Carroll	Charlotte	Cumberland
City of Danville	City of Emporia	City of Martinsville	Franklin
Dickenson	Dinwiddie	Floyd	Halifax
Galax City	Grayson	Greensville	Mecklenburg
Henry	Lee	Lunenburg	Pittsylvania
Norton City	Nottoway	Patrick	Smyth
Prince Edward	Russell	Scott	Wise
Sussex	Tazewell	Washington	Wythe

All proposals submitted must insure that funds awarded are spent within these localities and only in support of programs that directly benefit these localities.

The TICRC alone will have authority to grant funding, however, the organization and governance will be provided by the TICRC Board and Executive Director(s) along with the CCAM Board of Directors and the CCAM Director of Workforce Development. The CCAM Director of Workforce Development will also oversee and verify implementation plans as proposed in successful proposals, provide technical assistance and verify sustainability efforts and long term success.

III. Statement of Needs

Successful proposals will define CoE's specifically targeted at medium-skilled advanced manufacturing jobs. These jobs are defined in part as requiring either significant experience or significant on-the-job training, so the strongest proposals will focus on intensely hands-on training programs that raise skills and knowledge well above basic or entry levels.

The CoE's will focus on three main job classifications. They are broadly identified as 1) machinists 2) welders 3) industrial machinery mechanics. Successful proposals will provide curriculum and training programs that produce students who achieve industry recognized certifications, such as NIMS for machinists, AWS for welding, and Siemens/NIMS for industrial mechanics. The targeted industries include but are not limited to aerospace, automotive, and heavy machinery manufacturers.

The industry recognized certifications are third party verifications of skills and are an absolute requirement for each of the CoE's. It will also be the most critical measure of success. By the third year of operation, each funded CoE will need to produce 70 to 80 students per year who achieve an above basic certification in one of the three job classifications identified. The total number of 70 to 80 should be split by the approximate ratio of 50% machining professionals, 28% welding professionals and 22% industrial mechanics.

The TICRC and CCAM are also working to increase the capacity of community colleges in the region to produce students with entry or basic skills in machining, welding, and industrial mechanic related jobs. This will eventually allow the CoE's to focus on training for the higher levels in each of the job categories once a pipeline is established. While entry-level/foundational training is not the focus of this funding (the TICRC "competitive" Education program is intended to address basic training needs) strong proposals will provide plans for basic through advanced training in the early stages or plans that build to the higher levels while phasing out lower levels as the pipeline develops.

IV. Major Project Objectives

Successful proposals will address the following list of subject areas as it relates to establishing a CoE in advanced manufacturing training and with careful consideration of all the information above. The strongest proposals will set clear goals and objectives that have specific and measurable results. In each of the areas listed below, describe current capabilities, plans to expand existing capabilities, and plans to create new capabilities or any combination that delivers a CoE that will fill the workforce needs of advanced manufacturing companies.

A) Organizational structure and leadership

The proposing organization must be a governmental entity or IRS-designated non-profit. They must provide either by narrative or an organizational chart the leadership structure of the proposed CoE. It should include brief description of roles and responsibilities, including the level of dedication to the CoE must be specified. If the organization will be offering part time support then the percentage of hours that will be dedicated to the CoE should be shown. Brief Bios and summaries of qualifications should be included for people in key leadership roles.

B) Partnerships and working alliances

Describe any working partnerships and/or collaborations with educational, governmental, private organizations or companies that add value to your CoE. Describe the means by which industry input will be obtained on a regular periodic basis to guide the operation of the CoE. At minimum, the formation of an industry advisory council will be required. Proposing organizations should provide descriptions as to how the advisory council will operate and interact with the CoE leadership. It should also provide profiles of council members and the organizations they represent.

Describe the level of collaborations across the region, and explain how you will incorporate local/regional and/or urban/rural partners. This can include but not be limited to workforce investments boards, economic development organizations, corporate partners, and postsecondary institutions (community colleges, 4-year institutions, etc.) in the region.

C) Facilities

Identify the space(s) that will be used to delivery all training and/or testing. Explain how site control will be obtained and under what terms (purchase, lease, or other). Include all special requirements such as floor space, dock access, ventilation, power requirements and so on. Note that in order to expedite the implementation of the CoE's and initiate the associated training programs, new construction of facilities will be viewed as a low priority for funding.

D) Equipment

List all equipment you need to deliver high quality training to provide the capacity for the 70 to 80 student outcome identified above. This includes but is not limited to hand tools, inspection tools, special equipment and so on. Include basic specifications, and any special options as well as PC workstations and software.

E) Curriculum

Describe the curriculum you plan to use and/or your plans to develop curriculum. Each proposal should address basic level training but special emphasis should be on advanced training. Strong proposals will connect levels of industry certifications/credentials with certain milestones within the curriculum.

F) Instructors

Describe the capabilities and experience of existing instructors and plans to recruit and/or develop new instructors as needed. Strong proposals will estimate the number of instruction hours required by their programs with the available hours from either full or part-time instructors or a combination of both.

G) Industry certifications and testing

A requirement for all CoE's is to design curriculum and deliver training that prepares students for testing for third party industry recognized certifications/credentials. The number of students that successfully earn certifications/credentials will be the most essential measure of success for each of the individual CoE's. Although high performing CoE's will have many

single students earning multiple certifications/credentials, the measure is how many students are certified, not the number of certifications. Again, the goal is by the third year 70 to 80 students are being awarded medium to high level certifications/credentials split approximately 50% or 35 to 40 students with machinist related credentials, 28% or 20 to 22 students with welding related credentials and 22% or 15 to 18 students with industrial mechanic related credentials. Strong proposals will address issues in facilitating testing and/or helping students seek testing and ultimately succeed in earning medium to high level certifications/credentials. The only acceptable certifications will be from the National Association of Manufacturer's (NAM). They are commonly referred to as NAM endorsed certifications.

More specifically the acceptable certifications for each of the three job categories will be as follows:

Machinist related – from the National Institute for Metalworking Skills or NIMS

Prerequisite machining certifications/credentials are listed below (they do not count towards the 70 to 80 third year goals)

The NIMS metal working credentials listed below are to be considered minimum prerequisites for the CoE's and will not count towards the third year goal of 70 to 80 certified professionals per year, of which, approximately 50% or 35 to 40 should be machining related. However, the CoE's can, and in some cases, will need to offer this training to create a pipeline for the advanced certifications that will count towards the third year goals.

Machining level 1	Measurement, materials and safety
	Job Planning, benchwork and layout
	Manual milling skills 1
	Turning operations: Turning between centers
	Turning operations: Turning chucking systems
	Grinding skills 1
	Drill press skills 1
	CNC turning: Programming, setup & operations
	CNC milling: Programming setup and operations
	CNC turning: Operations
	CNC milling: Operations
Metal forming level 1	Metal forming level 1
Machining level 2	Manual milling skills 2
	Turning 2 (manual)
	Drill press skills 2

Required machining certifications/credentials for all CoE's are listed below (these will count towards the 70 to 80 third year goals)

Required training and acceptable deliverables for all CoE machining programs start with the credentials listed below. They are very CNC centric credentials and will require sufficient CNC milling and turning machinery and the specialized tools and inspection equipment that goes with it. CAD/CAM software will also be vital.

Machining level 2	CNC milling skills 2
	CNC turning skills 2
Machining level 3	CNC turning skills 3
	CNC milling skills 3

Additional machining "specialty" certifications/credentials for all CoE's are listed below- (these will also count towards the 70 to 80 third year goals)

All CoE machining programs are required to include training in at least two specialty credentials. They are listed below. Most of these specialty options will require more specialized equipment and instructor expertise.

Machining level 2	Grinding skills 2
	EDM - wire
	EDM - plunge
Press brake level 2	Operate non-CNC drive press brake skills 2
	CNC punch (turret)press level 2
Press brake level 3	Setup and operate non-CNC mechanical 3
	Setup and operate CNC drive 3
Die making Level 2	Die making Level 2
Die making level 3	Die making level 3
Screw machine Level 2	Operate with single spindle 2
	Operate with multiple spindle 2
Screw machine level 3	Setup and operate with single spindle 3
	Setup and operate with multiple spindle 3

Welding related – from the American Welding Society or AWS

Prerequisite welding certifications/credentials are listed below (they do not count towards the 70 to 80 third year goals)

Sense Program levels 1 through 3 are to be considered minimum prerequisites for CoE's and will not count towards the third year goal of 70 to 80 certified professionals per year, of which, approximately 28% or 20 to 22 should be welders. However, the CoE's can, and in some cases, will need to offer this training to create a pipeline for the advance certifications that will count towards the third year goals.

SENSE Program
Level 1 - Entry Welder
AWS QC10
AWS EG2.0
Level 2 - Advanced Welder
AWS QC11
AWS EG3.0
Level 3 - Expert Welder
AWS QC12
AWS EG4.0

Required welding certifications/credentials for all CoE's are listed below (these will count towards the 70 to 80 third year goals)

Required training and acceptable deliverables for the CoE's welding programs will start at "Certified Welder" and include one or any combination of processes, positions and/or thicknesses. For a complete list of supplements/codes and the abbreviations

associated with the AWS Certified Welder certification, see AWS document "Cert-Guide to Interpreting Abbreviations - 06/01/2012" available on the AWS website. Also all CoE's will offer training for and certification of, Certified Welding Inspector and Certified Associate Welding Inspector

Certified Welder w/any combination below		
Process	**Position**	**Thickness**
SMAW	1G	U
GMAW	2G	L
GMAW-S	3G	xx-xx
FCAW	4G	x/x
GTAW	5G	SCH
SAW	6G	WB
BZ	6GR	WOB
	1F	OD
	2F	
	3F	
	4F	
	V	
	D	
	A	
Certified Welding Inspector		
Certified Associate Welding Inspector		

Additional welding "specialty" certifications/credentials for all CoE's are listed below (these will also count towards the 70 to 80 third year goals)

All CoE welding programs are required to include at least one specialty option. Acceptable deliverables as specialty options include senior certified welding inspectors, welding educators, supervisors and robotic arc welding certifications.

Senior Certified Welding Inspector
Certified Welding Educator
Certified Welding Supervisor
Certified Robotic Arc Welding

Industrial Mechanic related – will be from two NAM approved sources, the National Institute for Metalworking Skills (NIMS) and Siemens SMSCP

Prerequisite industrial mechanic certifications/credentials are listed below (they do not count towards the 70 to 80 third year goals)

The NIMS and Siemens credentials listed below are to be considered minimum prerequisites for the CoE's and will not count towards the third year goal of 70 to 80 certified professionals per year, of which, approximately 22% or 15 to 18 per year should be industrial mechanic related. However, the CoE's can, and in some cases, will need to offer this training to create a pipeline for the advanced certifications that will count towards the third year goals.

Siemens (SMSCP) level 1	Mechatronic systems assistant

Required industrial mechanic certifications/credentials for all CoE's are listed below (these will count towards the 70 to 80 third year goals)

Required training and acceptable deliverables for all CoE programs start with the credentials listed below. Strong proposals will design training that prepares students to test for both the NIMS and Siemens certifications.

NOTE: NIMS Industrial Maintenance Technician credentials are new and designed specifically for the industrial mechanics job classification. They are currently progressing through the NIMS national accreditation process and are expected to be available sometime between the end of February and beginning of March, 2014. Drafts of "Skills Standards" are available now. The skill standards provide a comprehensive list of skills, knowledge and abilities expected in this job classification which should provide sufficient information to design instruction.

Siemens (SMSCP) level 2	Mechatronic systems associate
NIMS – Industrial Maintenance Technician. Note: NOT available until March 2014. Draft copies of Skills Standards are available.	Maintenance operations
	Basic mechanical systems
	Basic hydraulic and Pneumatic systems
	Electrical systems
	Electrical control systems
	Process control systems
	Maintenance welding
	Maintenance piping

Additional industrial mechanic "specialty" certifications/credentials for all CoE's are listed below (these will also count towards the 70 to 80 third year goals)

NIMS - Machine tool maintenance and Machine building will remain optional for the first three years. These are highly specialized and the choice to include them should be tied to any local industry demand.

NIMS – Machine tool maintenance, service and repair level 2	Preventative maintenance
NIMS – Machine tool maintenance, service and repair level 3	Machine Service and repair
	Machine repair and rebuilding
NIMS - Machine Building Level 2	Machine Building Level 2 mechanical assembly
NIMS - Machine Building Level 3	Machine Building Level 3 mechanical assembly

H) Student recruitment

Describe your plan to identify, recruit, and enroll students. Identify communities, schools and other sources you expect to draw from in order to fill your CoE student enrollment needs. This can include but is not limited to workforce investment boards, economic development organizations, corporate partners, high schools and community colleges in the region. This section could also include any student assessments and/or screening processes.

I) Marketing and community outreach

Each CoE will need a marketing plan to address the misconceptions surrounding careers in manufacturing. That includes but is not limited to misconceptions such as images of dirty factories, companies outsourcing and leaving the region, and the emphasis put on the importance of 4 year degrees.

Strong proposals will identify challenges and link a strategy to address each of them. It should identify target groups such as, K-12 students, parents, transitioning workers, unemployed and link a strategy to the target group. Include and challenges or circumstances unique to the surrounding communities. Strong proposals will also provide detail as to how Virginia Manufacturers Association (VMA) initiatives such as "Dream It, Do It" are to be incorporated in marketing plans with the expectation that matching funds are expected from the VMA. Marketing expenses should be considered a year two priority and not in the current funding year.

J) Monitoring outcomes and success

A monitoring and evaluation plan is required that incorporates both qualitative and quantitative measures to show that progressive goals are being met and regular reporting will occur. Regular progress reports should be submitted at least quarterly to Director of Workforce Development, CCAM. These reports will also be reviewed TICRC and CCAM leadership.

Measures of success and areas to report should include but not be limited to:

- Performance to phasing schedule and project timeline as per the proposing organization's own proposal
- By the third year 70 to 80 students are being awarded medium to high level certifications/credentials split approximately
    - 50% or 35 to 40 students with machinist related credentials
    - 28% or 20 to 22 students with welding related credentials
    - 22% or 15 to 18 students with industrial mechanic related credentials.
- An added measure of success is in how many of the 70 to 80 students earn multiple certifications/credentials
- How many achieve the highest levels of certifications/credentials
- How many specialty certifications/credentials are earned
- Performance to budget as per the proposing organization's own proposal
- Jobs, apprenticeships and internships

Optional enhancements to the capabilities of proposed CoE's

Applicants may wish to address optional program offerings that will expand and enhance the capabilities of the CoE and its students, including mobile training labs, Lean, Six Sigma and other soft skill training offerings etc.

Mobile Labs will not be required of CoE's and should be considered optional in this RFP. The mobile labs may be used to work with the CoE's, community colleges and possibly high schools within the region to target one or more of the same three main job classifications which are broadly identified as machinists, welders, or industrial machinery mechanics. They could have the dual purpose of serving as either training platforms or marketing tools used to reach out to remote communities within the region. The proposing organization's choice to submit or not submit a proposal for a mobile lab will neither harm nor strengthen its proposal for a CoE. Funding may not be available until year two or three of the CoE implementation process. This could be a subject for a later RFP depending on the response from this RFP cycle and available funding.

Lean, Six Sigma and other soft skill training capabilities should also be considered optional in responding to this RFP.

If such mobile or soft skill training is being proposed for your CoE you must address the specific costs involved as these will be lower funding priorities and should be segregated from the costs to accomplish the priority objectives of training and credentialing the three job classifications at the mid-skill levels described above.

V. Phasing Schedule or project timeline for implementation

Template for a quarterly timeline for milestones and budget is attached to TICR online application. It is also acceptable to create a work breakdown structure (WBS). All WBS submitted must have a specific timeline for all milestones and distinctly define objectives and associate them with clear and measurable results.

VI. Budget and budget match

Applicants must address how fixed assets and annual operating costs will be funded. TICR funds may be requested for either or both, and matching funds may be dedicated to either or both. TICR funds may be used for up to the standard three year project period. As stated earlier, new construction of facilities will not be a funding priority. Each proposal will include detailed budget estimations for each of the following two categories. A **dollar per dollar match is required** and all proposals must include cash and/or in-kind matching funds with sufficient explanation of sources and associated value.

Fixed costs – representing the startup costs for facilities, equipment/tools, and software

Operating costs – estimation of annual costs for year 1 and year 2 instructors, technicians, administrative support, marketing, materials and facilities.

The TICRC and CCAM realize that each proposal will have a unique budget. Below is some general information. In order to fund the anticipated three CoE's, it is expected that individual requests for operating funds will not exceed $500,000 annually. If however, there are specific items within the budget that you have questions about, submit them via e-mail to the address on page one. Please do not ask for a review and/or rating of your entire budget only specific questions concerning particular details.

General budget information

Recommendations on the chart below are from the BCG report and show only general overall cost estimations for the three CoE's that were anticipated by the BCG. It is information presented to the TICRC and CCAM and do not represent set amounts of funding to be awarded. Strong Proposals will show detailed budgets that deliver the highest quality CoE in the most cost effective manner possible.

Fixed Costs		**Operating Costs**	
3 facilities	**$3M - $4.5M**	**Instructors/ techs**	**$1.0M – $1.3M**
Equipment	**$12.3 - $13.2M**	**Admin Support/Marketing**	**$0.6M - $0.8M**
Software	**$0.3M - $0.6M**	**Facilities and Materials**	**$0.6M - $1.2M**
3 Mobil Units	**$1.4M - $1.6M**		
Total	**$17M - $20M**	**Total**	**$2.2M - $3.3M**

Matching Funds

A primary factor in considering the award of funds is the level and commitment of business and industry partners. Projects are required to show one dollar of match to one dollar of TICRC funding. Matching resources may come from various sources and may be cash or in-kind. In-kind resources include, but are not limited to, staff time (i.e., industry partners attending advisory committee meetings), facilities, and the use of equipment. Cash match may include monetary or equipment donations.

Examples of match include, but are not limited to:

- Proposing organizations commitment of supervision, rent, utilities, etc.
- Federal grants
- Other state grants
- Equipment donations and/or pro-rated value for use of existing equipment funded by non-TICR sources

- Costs to deliver prerequisite or optional enhancement training programs, only if those are new to the CoE service area and are being created to establish a foundational level pipeline of students (existing training programs will not serve as match).
- Professional time donated to the project by individuals (outside of the proposing organization)
- Donations of office space or meeting locations (at market rental value)
- In-kind services by outside organizations, e.g. mailings, advertisements in existing flyers, labor hours paid for during training,
- Donations of booth space or conference attendance
- Indirect administrative overhead costs when adequate justification is provided for how the rate was calculated
- Private and corporate foundation grants

VII. Proposal Preparation and Submission Instructions

Proposals must be submitted on-line using the TICRC website (www.tic.virginia.gov). An application template specific to the CoEs is being developed. Please notify the sponsor contacts via e-mail if your organization is considering submitting a proposal so that you may be notified when the template is available online.

VIII. Evaluation and Award Criteria

Proposals will be reviewed and scored independently by several readers recruited from industry, academia and government organizations. They will be using a standard rubric with emphasis on proposal attributes that are described throughout this RFP. Scores will be shared with TICRC/CCAM leadership and the CoE steering committee and used for information purposes only. The scores will not be the only determining factor in awarding funding.

Interviews by TICRC and CCAM leadership will be conducted with proposing organizations. This will be a review of the proposal and a chance for submitting organizations to clarify details.

Results will be presented to the TICRC-Education Committee and full Commission for final review and any approval of funding.

IX. Timeline for Deliverables

- Released on January 10, 2014
- All proposals due no later than 5:00 pm (EST) April 11, 2014
- April 12 through May 20, 2014
    - Reading and scoring
    - Interviews with proposing organizations, schedule TBD
    - Prepare report and recommendations for the TICRC Education Committee.
- Possible approval by TICRC as early as May 22, 2014.

X. General Terms and Conditions

TICR General Funding Policies will be in effect, and standard grant award and management policies will apply, including the Commission's reimbursement process.

XI Special Terms and Conditions

Proposing organization must agree to quarterly assessments by TICR/CCAM leadership of progress toward milestones and outcomes.